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May 16, 1950.

N.M., Sandoval Co., Limy Creek 3 miles  
above mouth of Guadalupe Creek

May 13, 1950

W. K.

Pantosteus plebeius

82 eggs.

12 ♂ prolarvae to larvae - from gravel of redd  
eggs. in formalin.

shell semi-opaque, semi-translucent  
spheroidal, nearly spherical;

retellus 7 to 8 diameter of shell.

all distinct & separate except 1 clump of  
prolarvae here shell dec. embryos.

eggs with ~~marked~~ trace of slight  
indications of granular, general color ~~dark~~.

? Rhinichthys cataractae transmontanus

. 26 eggs.

color pale pink

(incomplete)

May 13, 1950.

WJK50-05-13-01

Jersey creek one mile above mouth of  
Guadalupe creek.

Elev 5750

Cloudy.

6-30 ft wide, prob. to 4 feet deep, mostly soft mud,  
6-12 inches deep. Water low for this time of year.  
WWS, Cm. str, vegetation sparse, Potamogeton  
pectinatus, ? Nostoc Stone P. & Cottonwood.

Washed P.V. Capt. - fry net - A71068 1200.

Bst, n,

Pantosteus plebeus

fry fairly common near stone in mod or slow C.

ads maybe spawning yet - one with red side seen.  
yearling f.c. in large schools, in mod. C, with f.

Solms. prob. S. trutta

2 seen about 12-15 inches long chasing a  
2 inch fish into the shallows at the foot of a rft b.

Rhynchthys catenatus transmontanus

seen in cf.

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May 13, 1950 #2.

WJK50-05-13-02

Jenny creek three miles above mouth of  
Quadradope creek.

1240 A69068

Cloudy, becoming much cooler and windy.  
Pantosteus is spawning.

1317 Spawned (?) in mate.

♂s are on the riffle, ♀ enters and is  
pursued by group.

1338 spawned. 1 ♀, 2 ♂, one on either side,  
Quivered with backs arched and dorsals spread;  
lasted long - approximately three seconds.

1400 several spawnings - different females  
vibrations stir up silt.

Gila and Rhinichthys maybe (apparently  
are) egg eating. Pantosteus present  
no fighting.

Rhinichthys maybe spawning.

1615 Left at 1500 and returned at 1525, not  
much doing. Nothing happened since 1545.  
<sup>[Spawning Pantosteus present]</sup>  
Fish maybe have been disturbed too much by  
me, by a 14-16 inch brown trout which made  
several forays across the bed after fish or possibly  
by a ~~cooling~~ declining water temperature A75065

May 13, 1958 #3.

The air temp. is just high temporarily. The sun is shining. It has been completely cloudy and with occasional showers - apparently more upstream. Stream 35 feet wide at this point.

Spawning bed, about 20 feet long, 4 feet wide near stone at tail of large, excellent trout pool and at head of riffle. Upper end of bed is distinctly in the pool, the lower distinctly in the riffle. Bottom of ~~large gravel, fine gravel~~ <sup>coarse gravel mixed</sup> and sand - stones mostly less than 3 inches in diameter. Bottom clear of fine sediment and growths - stones clear. Current moderate - approx 1 ft/sec. Depth ~~to~~ 3-6 inches.

Males are usually scattered over the redd, their colors being very intense but not especially conspicuous except when they can be seen from the side. Some move about, some remain more or less in one position on the bottom. There seem to be no territories. The only contest between the ovs is to get next to the female.

Females are larger in general and more somber. They usually come out of the upper pool, occasionally from the direction of the riffle, onto the redd at which time they

✓  
May 13, 1950 #4

were pursued by one or more males. ~~They~~ When they came to rest, the males who have been jockeying for position a head-length or so back of the ♀ snuggle close to the ♀. usually one on either side with one to several extra on top. Once a ♀ ~~was~~ spawned with only a single ♂ attending.

The act is accompanied by an arching of the back, spreading of the dorsal and a rapid quivering which lasts from  $\frac{1}{2}$  to approximately 3 seconds.

No particular type of spot seemed to be chosen ~~so~~ far as could be determined, except that possibly slight depressions might have been used ~~rather than~~ the more frequently than the more level areas.

Some pictures were taken but conditions were not good for observations or photography.

Two vials of fish were taken. One from the gravel, the other of free-swimming forms. The fry from the gravel tended to swim down & away from the current when I was attempting to wash them out of the vial & into the net in order to throw out the sand in the vial. The others did not give such a strong reaction.